



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

P4400-150
Job Sheet 176164



Part No: P4400-150

Job Qty: 1 ea

Part Name: Plasma® Long Line 4,400 lbs Safe Work Load (2,000 kg)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 4/18/18

Job Tracking No:

Due Date: 4/20/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG P###-## Rev 1(TEO17-741)

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Purchasing	1 pcs		4/19/18	0.00	0.00	Purchasing		<i>[Signature]</i>
120	Packaging	1 pcs		4/19/18	0.00	0.00	Packaging2		<i>[Signature]</i>
130	QC	1 pcs		4/19/18	0.00	0.00	QC6		
131	Small Fab	1 pcs		4/20/18	0.00	1.00	Small Fab-5		<i>[Signature]</i>
132	QC	1 pcs		4/20/18	0.00	0.00	QC5		
135	DC	1 pcs		4/20/18	0.00	0.00	DC		<i>[Signature]</i>
140	Packaging	1 pcs		4/20/18	0.00	0.00	Packaging3		<i>[Signature]</i>
150	QC21-SA	1 Ea		4/20/18	0.00	0.00	QC21		<i>[Signature]</i>

Part Op 110 - Issue P/O to Tulmar; P/O NLR - Manufacture as per DWG P4400-150 - Certificate of Conformity is
Descriptions: required

131 - 1-Engrave 1632T22 tags as per DWG sheet 7. 2-Attach first tag using 90177A218 ring to zipper on -39 bag, place second tag in front pocket of -39 bag. 3-Pack bag.

135 - Photocopy blue file OM-SLP Long line Rev 8

21
9-80

APR 18 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
P4400-150P	Plasma® Long Line 4,400 lbs Safe Work Load (2,000 kg)	1 pcs (1 ea)	110-Purchasing	<i>2045267</i>
1632T22	Aluminum Tag 1" X 2" X 0.04"	2 pcs (2 ea)	131-Small Fab	
600.1327	Long Line Carry Bag	1 Ea (1 ea)	131-Small Fab	
90177A218	Split Ring	2 Ea (2 ea)	131-Small Fab	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Purchasing	P4400-150P	1	1	0
131-Small Fab	1632T22	2	141	0
	600.1327	1	0	0
	90177A218	2	120	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order: _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	SI
Part No. _____		M:
NCR No. _____		Thermo
		L:

Date :	Step #:	Q
--------	---------	---

Description Work Order Deviation

Root Cause			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperati ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Rou ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Da ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamina ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersir ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐	
Misidentified ☐	Past Due ☐		

Work Order update only ☐

Engineering ☐
Quality ☐
Other ☐

51042) Approval

Completed By

Id / Supervisor
al Verification

A Coordinator
approval

Date: 04/18/18

Inspector: _____
Revision: 1
Job No: 176164
Part: P4400-150
Serial No/Batch: S062399
Container No: S062399

DART AEROSPACE
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
Email: sales@dartaero.com
TEL: 1 613 632-5200
www.dartaero.com

☐ Mislabeled
☐ Fit/Function
☐ Misaligned/off center

☐ Finish
☐ Misread
☐ Turning Sequence

oned Wrong
le Dimensions
Under tolerance
incorrect
ost/Missing
loved
ug



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

P4400-150
Job Sheet 168562



Part No: P4400-150

Job Qty: 1 ea

Part Name: Plasma® Long Line 4,400 lbs Safe Work Load (2,000 kg)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 11/17/17

Job Tracking No:

Due Date: 1/3/18

Created By: Chantal Lavoie

Type: Stock

Description:

Note: IPP Rev A 17.11.13 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Purchasing	1 pcs		1/3/18	0.00	0.00	Purchasing		AT 1/8/2016
120	Packaging	1 pcs		1/3/18	0.00	0.00	Packaging2		AT 1/8/2016
130	QC	1 pcs		1/3/18	0.00	0.00	QC6		
140	Packaging	1 pcs		1/3/18	0.00	0.00	Packaging3	Pk 6002	MAR 02 2018
150	QC21-SA	1 Ea		1/3/18	0.00	0.00	QC21		21 MAR 02 2018

Part Op 110 - Issue P/O to Tulmar; P/O 638417 - Manufacture as per DWG P4400-150 - Certificate of Conformity is
Descriptions: required

NOV 20 2017

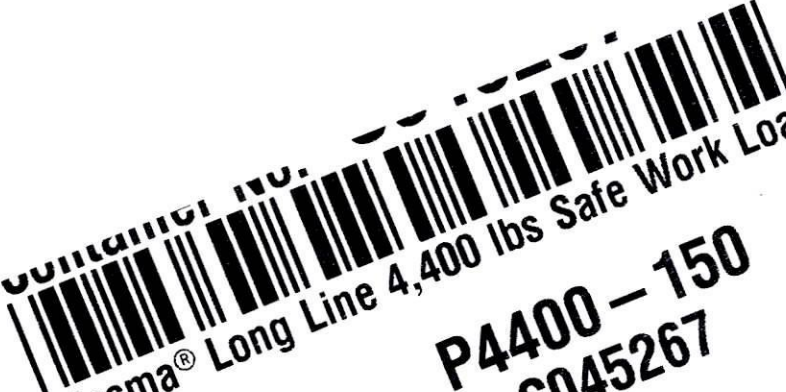
Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
110-Purchasing	P4400-150P	1	0	0	0

Part Specifications

Specifications could not be found.

Plex 11/17/17 8:06 AM dart.lavoie.chantal

CONTAINER NO.

Plasma® Long Line 4,400 lbs Safe Work Load (2,000 kg)

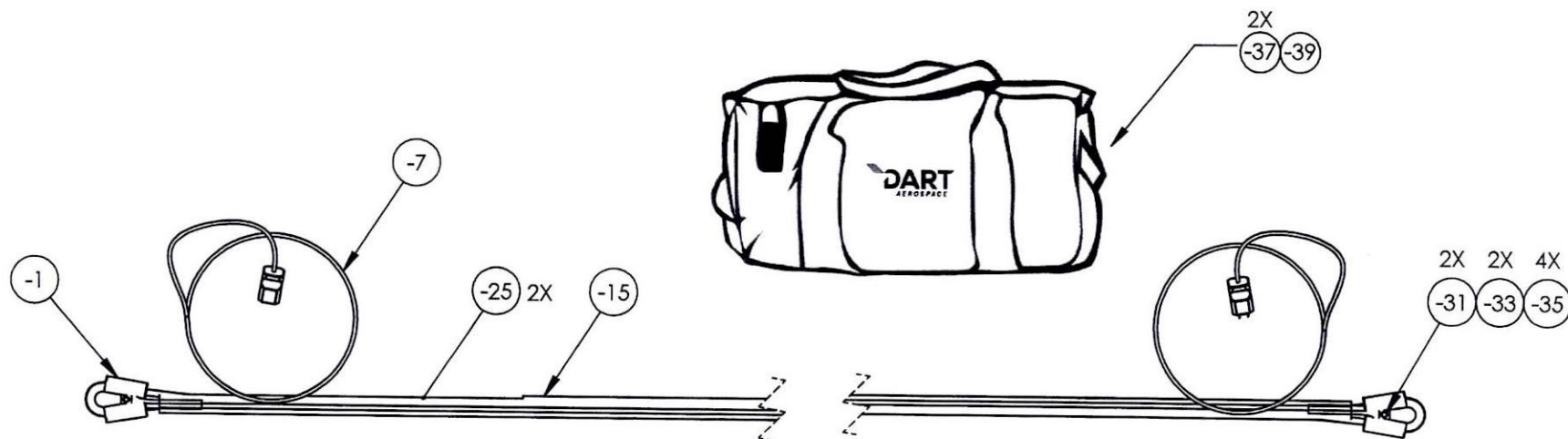
PART NO: P4400-150
Serial No/Batch: S045267
Revision:
Operation:
Change No:
Packaging

Mfg Date: 02/26/18
Job No: 168562

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		RELEASED FOR PRODUCTION.	5/5/2017	SM	JAG

TEO ATTACHED



ASSY QTY	ASSY QTY	ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			X		-1	1	LINE/THIMBLE ASSEMBLY			2
			1	B/O	-3		ROPE		SEE TABLE 1, MODIFIED	2
			2	B/O	-5		THIMBLE	STEEL	SEE TABLE 1, MODIFIED	3
			2	B/O	-6		EPOXY	EPOXY	(SMOOTH CAST 45D)	2
		X			-7	1	WIRE ASSEMBLY			4
		1		B/O	-9		WIRE		14/3 SJTOW, MODIFIED	4
		1		B/O	-11		3-PRONG MALE SPADE PLUG		EL-PLUG-M (PASS & SEYMOUR # PS5965Y)	4
		1		B/O	-13		3-PRONG FEMALE SPADE PLUG		EL-PLUG-F (PASS & SEYMOUR # PS5969Y)	4
	X				-15	1	JACKET		SEE TABLE 2	5
	1			B/O	-17		WEBBING		SEE TABLE 2	5
	1			B/O	-19		1" VELCRO	NYLON	1" HOOK FASTENING TAPE (J. ENNIS FABRICS # VELSE9004)	5
	1			B/O	-21		1" VELCRO	NYLON	1" LOOP FASTENING TAPE (J. ENNIS FABRICS # VELSE9005)	5
1	1			B/O	-23		2" VELCRO	NYLON	2" HOOK FASTENING TAPE (J. ENNIS FABRICS # VELSE9006)	5.6
X				B/O	-25	2	END RETURN		SEE TABLE 3	6
1				B/O	-27		WEBBING		TOP GUN MATERIAL, MEDIUM BLUE	6
1				B/O	-29		2" VELCRO	NYLON	2" LOOP FASTENING TAPE (J. ENNIS FABRICS # VELSE9007)	6
				B/O	-31	2	BOLT	STEEL	AN3-10A	1
				B/O	-33	2	NUT	STEEL	MS21044-N3	1
				B/O	-35	4	WASHER	STEEL	AN960-10	1
					-37	2	TAG	PAPER		7
				B/O	-39	1	BAG		DART AEROSPACE BAG (600.1327)	1
ASSY -25	ASSY -15	ASSY -7	ASSY -1							

NOTE:
1. CONSULT LONG LINE ASSEMBLY MANUAL FOR PRODUCT ASSEMBLY.

DART
AEROSPACE

LONG LINE

TITLE		P####-##		REV 1
DWG NO.		P####-##		REV 1
MATERIAL		UNLESS OTHERWISE SPECIFIED		
TREAT		DIMENSIONS ARE IN INCHES		
FINISH		.XXX ± .005 FRACTIONS ± 1/8		
SPEC		.XX ± .01 ANGLES ± 5°		
DRAWN BY:		SM 05/05/2017		
CHECKED:		DD 05/08/2017		
OPPS APPR:		AA 05/10/2017		
QA APPR:		JL 05/10/2017		
APPROVED:		JAG 05/17/2017		
SCALE		1:12		
DATE		5/5/2017		
SHEET		1 OF 7		

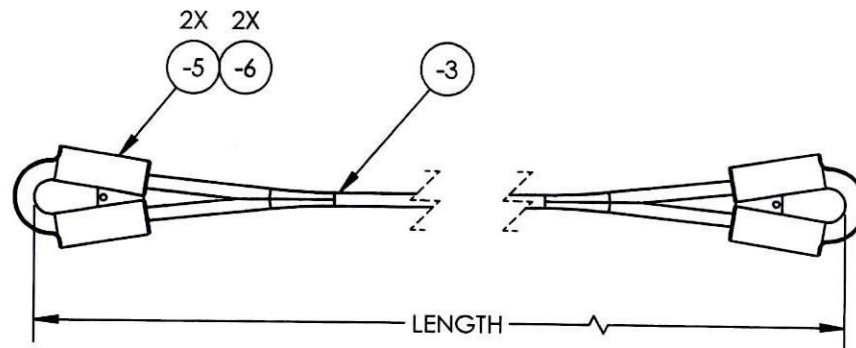
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REVISIONS			
REV	ECR	DESCRIPTION	DATE INITIAL APPROVED

TEO ATTACHED

TABLE 1

P####	-## (LENGTH FT.)	-3 (ROPE)	-5 (THIMBLE)
2500	50	3/8" PLASMA® 12 STRAND	G715PC
	100		
	150		
	200		
	CUSTOM		
3000	50	7/16" PLASMA® 12 STRAND	
	100		
	150		
	200		
	CUSTOM		
4400	50	1/2" PLASMA® 12 STRAND	G719PC
	100		
	150		
	200		
	CUSTOM		
5400	50	9/16" PLASMA® 12 STRAND	
	100		
	150		
	200		
	CUSTOM		
7300	50	5/8" PLASMA® 12 STRAND	G725PC
	100		
	150		
	200		
	CUSTOM		
9700	50	3/4" PLASMA® 12 STRAND	
	100		
	150		
	200		
	CUSTOM		
13200	50	7/8" PLASMA® 12 STRAND	G735PC
	100		
	150		
	200		
	CUSTOM		
15700	50	1" PLASMA® 12 STRAND	G745PC
	100		
	150		
	200		
	CUSTOM		



NOTE:

- CUT AND SPLICE ROPE WITH THIMBLES IN ACCORDANCE WITH THE LONG LINE ASSEMBLY MANUAL AND CUT LENGTH CALCULATOR.



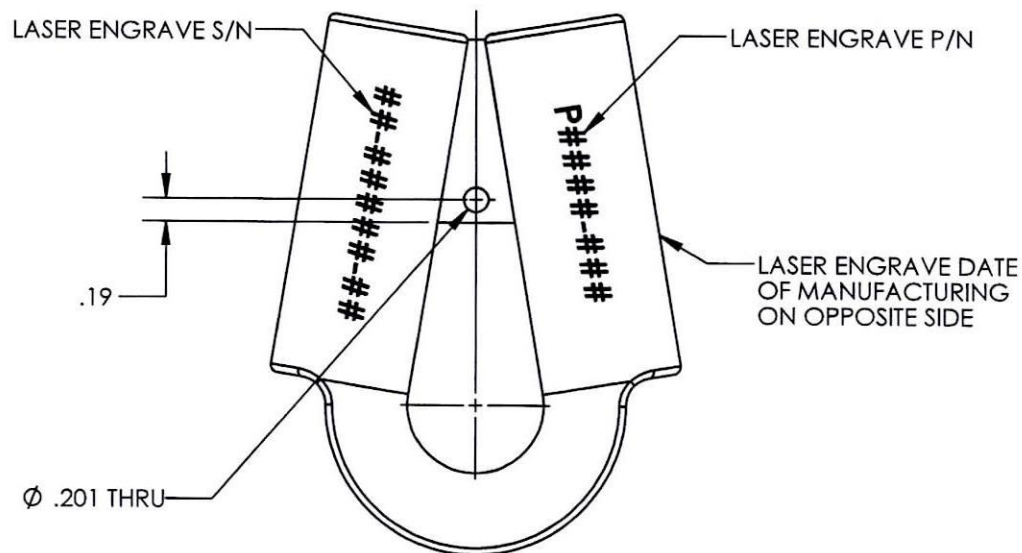
TITLE		LONG LINE	
DWG NO.		P####-##-1	
REV		1	
MATERIAL		UNLESS OTHERWISE SPECIFIED	
HEAT		DIMENSIONS ARE IN INCHES	
TREAT		.XXX ± .010 FRACTIONS ± 1/8	
FINISH		.XX ± .03 ANGLES ± 1°	
SPEC		.X ± .1 SURFACES = 125/	
DRAWN BY:		SM 05/05/2017	
CHECKED:		DD 05/08/2017	
OPPS APPR:		AA 05/10/2017	
QA APPR:		JL 05/10/2017	
APPROVED:		JAG 05/17/2017	
SCALE		1:6	
DATE		5/5/2017	
SHEET		2 OF 7	

①
LINE/THIMBLE ASSEMBLY

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				APPROVED

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NOTE:

1. USE THIMBLE REFERENCED TO IN TABLE 1.

DART AEROSPACE																					
TITLE LONG LINE																					
DWG NO. P####-##-5	REV 1																				
<table border="1"> <tr> <td>MAT'L STEEL</td> <td>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES</td> </tr> <tr> <td>FINISH GRAY POWDERCOAT</td> <td>.XXX ± .010 FRACTIONS ± 1/8</td> </tr> <tr> <td></td> <td>.XX ± .03 ANGLES ± 1°</td> </tr> <tr> <td></td> <td>.X ± .1 SURFACES = 125/</td> </tr> <tr> <td>SPEC</td> <td>1. BREAK ALL SHARP EDGES .015 x 45° OR .015R</td> </tr> <tr> <td>DRAWN BY: SM 05/05/2017</td> <td>2. DIMENSIONAL LIMITS APPLY AFTER PLATING</td> </tr> <tr> <td>CHECKED: DD 05/08/2017</td> <td>3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009</td> </tr> <tr> <td>OPPS APPR: AA 05/10/2017</td> <td>USED ON MODEL</td> </tr> <tr> <td>QA APPR: JL 05/10/2017</td> <td></td> </tr> <tr> <td>APPROVED: JAG 05/17/2017</td> <td></td> </tr> </table>		MAT'L STEEL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	FINISH GRAY POWDERCOAT	.XXX ± .010 FRACTIONS ± 1/8		.XX ± .03 ANGLES ± 1°		.X ± .1 SURFACES = 125/	SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	DRAWN BY: SM 05/05/2017	2. DIMENSIONAL LIMITS APPLY AFTER PLATING	CHECKED: DD 05/08/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	OPPS APPR: AA 05/10/2017	USED ON MODEL	QA APPR: JL 05/10/2017		APPROVED: JAG 05/17/2017	
MAT'L STEEL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES																				
FINISH GRAY POWDERCOAT	.XXX ± .010 FRACTIONS ± 1/8																				
	.XX ± .03 ANGLES ± 1°																				
	.X ± .1 SURFACES = 125/																				
SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R																				
DRAWN BY: SM 05/05/2017	2. DIMENSIONAL LIMITS APPLY AFTER PLATING																				
CHECKED: DD 05/08/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009																				
OPPS APPR: AA 05/10/2017	USED ON MODEL																				
QA APPR: JL 05/10/2017																					
APPROVED: JAG 05/17/2017																					
SCALE 2:3	DATE 5/5/2017																				
SHEET 3 OF 7																					

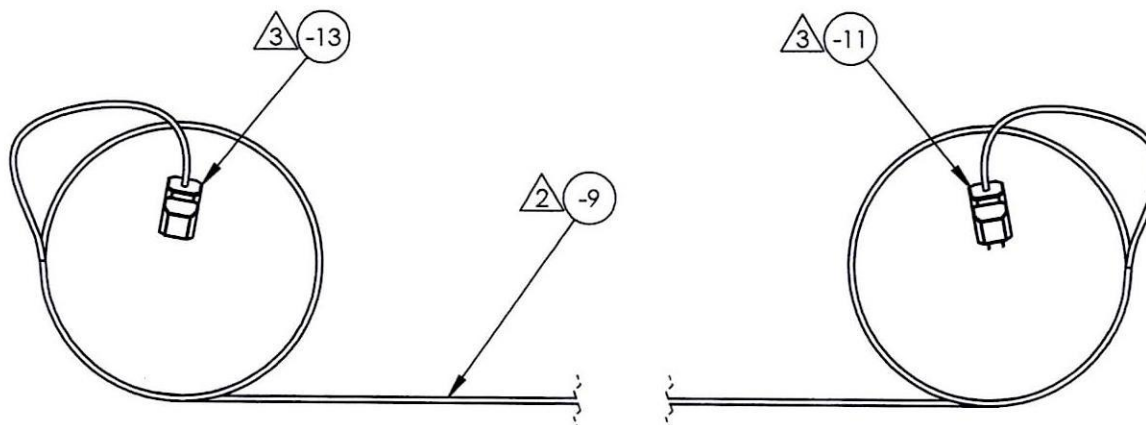
(-5)

THIMBLE

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REVISIONS			
REV	ECR	DESCRIPTION	DATE
			INITIAL
			APPROVED

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NOTES:

1. WIRING REQUIREMENTS MAY VARY UPON CUSTOMER REQUEST.
2. DETERMINE OVERALL WIRE LENGTH USING LONG LINE ASSEMBLY MANUAL.
3. SPLICE WIRE ENDS IN ACCORDANCE WITH LONG LINE ASSEMBLY MANUAL.

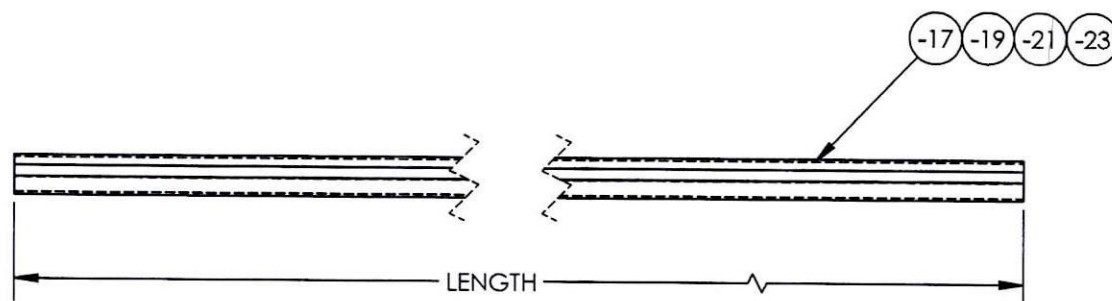
(-7)
WIRE ASSEMBLY

DART AEROSPACE	
TITLE LONG LINE	
DWG NO. P####-##-7	REV 1
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	.XXX ± .010 FRACTIONS ± 1/8
TREAT .XX ± .03 ANGLES ± 1°	.X ± .1 SURFACES = 125/
FINISH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
SPEC	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
DRAWN BY: SM 05/05/2017	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
CHECKED: DD 05/08/2017	USED ON MODEL
OPPS APPR: AA 05/10/2017	
QA APPR: JL 05/10/2017	
APPROVED: JAG 05/17/2017	
SCALE 1:8	DATE 5/5/2017
SHEET 4 OF 7	

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REVISIONS			
REV	ECR	DESCRIPTION	DATE
			INITIAL
			APPROVED

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NOTES:

1. PROVIDE -17, -19, & -21 MATERIALS TO VENDOR.
2. CONSULT LONG LINE ASSEMBLY MANUAL FOR JACKET LENGTH.

TABLE 2		
LONG LINE	-17 MATERIAL WIDTH	LENGTH
P2500-##	MURDOCK WEBBING CO. INC 4 1/8" SINGLE-WALLED TUBULAR WEB ORANGE	SEE NOTE 2
P3000-##		
P4400-##		
P5400-##		
P7300-##	MURDOCK WEBBING CO. INC 5 1/8" SINGLE-WALLED TUBULAR WEB ORANGE	
P9700-##		
P13200-##		
P15700-##	MURDOCK WEBBING CO. INC 6 1/8" SINGLE-WALLED TUBULAR WEB ORANGE	

-15

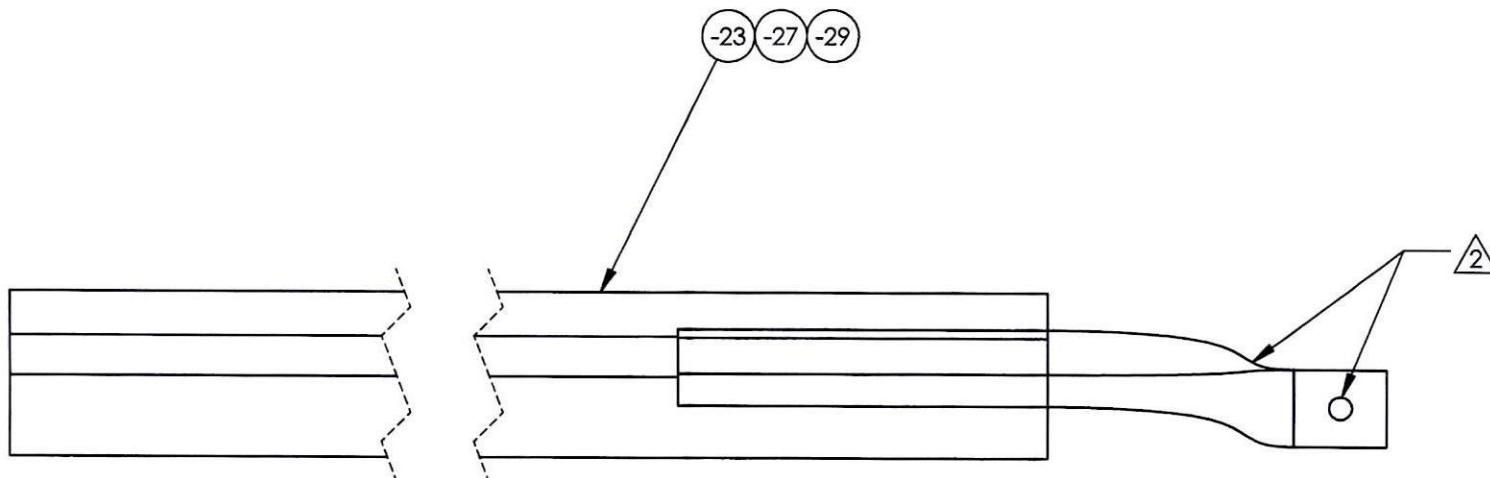
JACKET

DART AEROSPACE	
TITLE LONG LINE	
DWG NO.	P####-##-15
REV	1
MAT'L	UNLESS OTHERWISE SPECIFIED
TREAT	DIMENSIONS ARE IN INCHES
FINISH	.XXX ± .010 FRACTIONS ± 1/8
SPEC	.XX ± .03 ANGLES ± 1°
	.X ± .1 SURFACES = 125/
DRAWN BY:	SM 05/05/2017
CHECKED:	DD 05/08/2017
OPPS APPR:	AA 05/10/2017
QA APPR:	JL 05/10/2017
APPROVED:	JAG 05/17/2017
SCALE	1:4
DATE	5/5/2017
SHEET 5 OF 7	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED

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NOTES:

1. PROVIDE MATERIALS -23, -27, & -29 TO VENDOR.
2. WEBBING AND EYELETS NOT PROVIDED

DART AEROSPACE	
TITLE LONG LINE	
DWG NO. P####-##-25	REV 1
MAT'L _____ HEAT _____ TREAT _____ FINISH _____ SPEC _____	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/8 .XX ± .03 ANGLES ± 1° .X ± .1 SURFACES = 125/✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
USED ON MODEL	
DRAWN BY: SM 05/05/2017 CHECKED: DD 05/08/2017 OPPTS APPR: AA 05/10/2017 QA APPR: JL 05/10/2017 APPROVED: JAG 05/17/2017	
SCALE 2:3	DATE 5/5/2017
SHEET 6 OF 7	

TABLE 3

LONG LINE	END RETURN
P2500-##	ER-3044
P3000-##	ER-3044-1
P4400-##	ER-5473
P5400-##	
P7300-##	
P9700-##	ER-9713
P13200-##	
P15700-##	ER-15002

-25

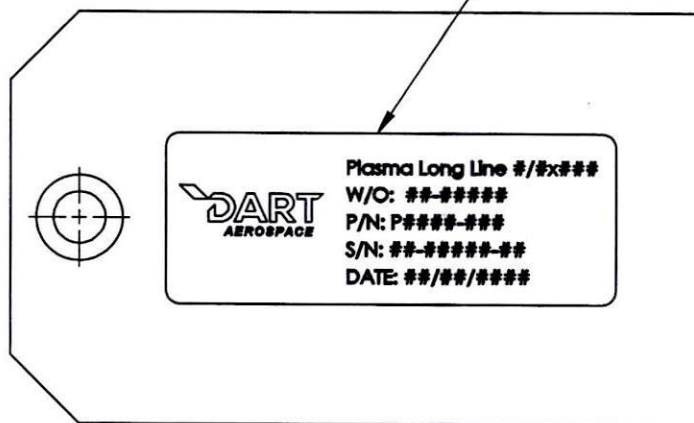
END RETURN

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
				APPROVED

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PRINT:
 PLASMA LONG LINE (ROPE DIAMETER (IN.))X(LENGTH (FT.))
 W/O: ##-#####
 P/N: P####-###
 S/N: ##-#####-##
 DATE: ##/##/####



NOTE:

1. ATTACH FIRST TAG TO ZIPPER ON -39, PLACE SECOND TAG IN FRONT POCKET ON -39.

-37

TAG

DART AEROSPACE	
TITLE LONG LINE	
DWG NO. P####-##-37	REV 1
MAT'L _____ HEAT _____ TREAT _____ FINISH _____ SPEC _____	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/8 .XX ± .03 ANGLES ± 1° .X ± .1 SURFACES = 125/✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY: SM 05/05/2017	USED ON MODEL
CHECKED: DD 05/08/2017	
OPPS APPR: AA 05/10/2017	
QA APPR: JL 05/10/2017	
APPROVED: JAG 05/17/2017	
SCALE 3:4	DATE 5/5/2017
SHEET 7 OF 7	

**ENGINEERING ORDER # TEO17-741**

SCALE: NTS

SHEET 1 OF 1

DRAWING NO. P###-##

REV: 1

EFF.: NEXT ORDER

CHANGE CATEGORY

TITLE: LONG LINE

☒ MAJOR ☐ MINOR

DATE 17.11.08

APPROVED: WM 11/14/2017

MFG. APPR.: DD 11/14/2017

CHECKED: WM 11/14/2017

DRAWN: VM 11/09/2017

TRANSACTION CODE (TC):

A-ADD C-CREATE
R-REVISE D-DELETE

REASON: UPDATE TO DRAWING CALLOUTS FOR NEW SUPPLIER OF LONG LINES

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FROM DART AEROSPACE LTD

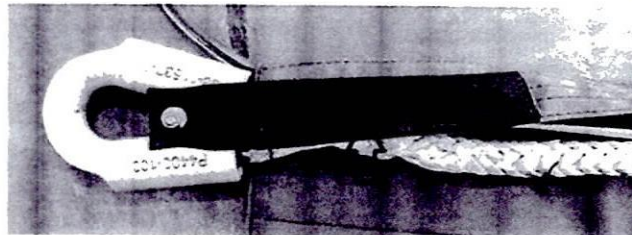
1) JACKET MUST BE MADE WITH REFERENCE TO DRAWING P###-## REV 1, LONG LINE ASSEMBLY MANUAL AND SAMPLE PROVIDED TO TULMAR WITH P/N P5400-50 S/N AC09006

2) ACCEPTABLE TO USE EL-PLUG-M (PASS & SEYMOUR #PS5965Y) OR McMaster PLUG #7216K5
ACCEPTABLE TO USE EL-PLUG-F (PASS & SEYMOUR #PS5969Y) OR McMaster PLUG #7216K6

3) ACCEPTABLE TO USE SJEOOW OR SJTOW ELECTRICAL WIRE

4) LASER ENGRAVE S/N AND P/N ON THIMBLE IS OPTIONAL

5) IDENTIFICATION WITH SEWN ON LABEL AT LOCATION SHOWN TO INCLUDE: "Dart Aerospace Ltd. P/N: P###-##, S/N: XX-XXXX-XX, MANUFACTURE DATE: MM/DD/YYYY",
WHERE THE P###-## WILL BE DEPENDENT ON THE MODEL ORDERED PER DRAWING



6) SELECTED COVER TO EXTEND THROUGH THIMBLE ENDS TO PREVENT ABRASION OF ROPE BY THIMBLE. THEY MUST BE THE SAME ON BOTH ENDS OF THE LONG LINE
ACCEPTABLE TO USE ONE OF: SLEEVE-DB-TEXSXX
WEARPADXX

7) INSPECT CONDITION OF ROPE AT THE END OF THE ROPE RETURN AND THIMBLES. FRAYING OR DAMAGE TO ROPE IS NOT ACCEPTABLE. INSPECT JACKETS AND COVER. SEWING TO BE CONTINUOUS AND WITH NO LOOSE THREADS. NO DAMAGE TO THE JACKETS IS ACCEPTABLE. ELECTRICAL CABLE MUST BE FREE OF DAMAGE OR NICKS TO THE INSULATION WHERE VISIBLE (FULL INSPECTION OF WIRE IS NOT REQUIRED). ELECTRICAL CONNECTORS MUST BE SECURELY INSTALLED. PERFORM CONTINUITY CHECK TO ENSURE THERE IS NO SHORT AND THAT CABLES ARE CONNECTED PROPERLY.

8) ACCEPTABLE TO USE Plasma® 12 STRAND ROPE OR Dyneema® SupreemX-12™ ROPE

9) PART MUST BE RECEIVED WITH CERTIFICATE OF CONFORMITY FROM TULMAR

10) IT IS ACCEPTABLE TO BUILD THE LONG LINE P###-## UTILIZING COMMON MANUFACTURING PRACTICES FROM Atlantic Braids AND Tulmar.
DART ASSEMBLY MANUAL IS FOR REFERENCE ONLY

11) ELECTRICAL WIRE LENGTH TO EXTEND 6' PAST THE BASE OF THE THIMBLE ON BOTH ENDS

12) JACKET LENGTH TO COVER THE ROPE UP TO AND INCLUDING THE END RETURN TAPER ON BOTH ENDS. JACKET LENGTH WILL BE DEPENDENT ON MODEL LENGTH

DOCUMENTS EFFECTED: ☐ PATTERN ☐ INSTALL INSTRUCTIONS ☒ BOM



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO038417

Supplier: TUL001-VC
Tulmar Safety Systems
1123 Cameron St
Hawkesbury
ON
K6A 2B8 Canada
Phone: 613 632 1282
Fax: 613 632 2030

PO No: PO038417
PO Date: 11/20/17
Due Date: 2/5/18
Purchase Order Revision:
Revision Date: 1/24/18
Ship-To Contact: Baker, Diane
Phone: dbaker@dartaero.com

RECEIVED
\$

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

PAID 1/20/18

Items											
Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
2	P3000-100P			Plasma® Long Line 3,000 lbs Safe Work Load (1,350 kg) As per dwg P3000-100 Rev. 1	Firmed	2/23/18	1 Ea	0 Ea	1 Ea	\$1,495.00/Ea	\$1,495.00
Line Item Note B168559											
3	P3000-150P			Plasma® Long Line -Manufacture as per DWG P3000-150 Rev 1	Firmed	2/5/18	2 Ea	0 Ea	2 Ea	\$2,035.00/Ea	\$4,070.00
Line Item Note B168558											
4	P3000-50P			Plasma® Long Line 3,000 lbs Safe Work Load (1,350 kg) As per Dwg P3000-50 Rev. 1	Firmed	2/5/18	8 pcs	0 pcs	8 pcs	\$960.00/pcs	\$7,680.00
Line Item Note B168560											
5	P4400-100P			Plasma® Long Line 4,400 lbs Safe Work Load (2,000 kg) As Per Dwg P4400-100 Rev. 1	Firmed	2/23/18	1 Ea	0 Ea	1 Ea	\$1,705.00/Ea	\$1,705.00
Line Item Note B168561											
6	P4400-150P			Plasma® Long Line 4,400 lbs Safe Work Load (2,000 kg) As per Dwg P4400-150 Rev. 1	Firmed	2/5/18	1 pcs	0 pcs	1 pcs	\$2,340.00/pcs	\$2,340.00
Line Item Note B168562											
7	P4400-50P			Plasma® Long Line 4,400 lbs Safe Work Load (2,000 kg) As Per Dwg P4400-50 Rev. 1	Partial	2/5/18	2 pcs	2 pcs	0 pcs	\$1,070.00/pcs	\$0.00

Line Item Note B168563

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2/15/2018

PURCHASE ORDER

8

PURCHASE ORDER

Items											
Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
					Firmed	2/23/18	2 pcs	0 pcs	2 pcs	\$1,070.00/pcs	\$2,140.00
Sub Total:							4	2	2		\$2,140.00
8	P5400-50P			Plasma® Long Line 5,400 lbs Safe Work Load (2,500 kg) AS Per Dwg P5400- 50 Rev. 1	Firmed	2/5/18	1 pcs /	0 pcs 1x	1 pcs AT 18/02/26	\$1,185.00/pcs	\$1,185.00
Line Item Note B168564											
10	P4400-25P			Plasma® Long Line 4,400 lb Safe Work Load (2,000 Kg) sales quote: 19062	Firmed	3/5/18	1 Ea	0 Ea	1 Ea	\$701.80/Ea	\$701.80
Line Item Note B170066											
11	P4400-50P			Plasma® Long Line 4,400 lbs Safe Work Load (2,000 kg) As Per Dwg P4400- 50 Rev. 1	Firmed	2/5/18	2 pcs /	0 pcs 2x	2 pcs AT 18/02/21	\$1,070.00/pcs	\$2,140.00
Line Item Note B169944											
12	P3000-50P			Plasma® Long Line 3,000 lbs Safe Work Load (1,350 kg) As per Dwg P3000- 50 Rev. 1	Firmed	2/5/18	2 pcs	0 pcs	2 pcs	\$960.00/pcs	\$1,920.00
Line Item Note B169943											
13	P3000-25P			Plasma® Long Line 3,000 lbs Safe Work Load (1,350 kg) As Per Dwg P3000- 25	Firmed	2/22/18	1 pcs /	0 pcs 1x	1 pcs AT 18/02/21	\$725.00/pcs	\$725.00
Line Item Note job # 169697											
Grand Total:										\$26,101.80	

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

- A005 RIGHT OF ENTRY
- A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)
- A012 CHEMICAL AND PHYSICAL TEST REPORTS
- A016 PERSONNEL QUALIFICATION
- A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
- A026 CERTIFICATION OF MATERIAL CONFORMANCE
- A041 QUALITY MANAGEMENT SYSTEM
- A042 DART NOTIFICATION BY SUPPLIER
- A043 RETENTION OF QUALITY DOCUMENT
- A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM
- A049 SUPPLIER AWARENESS

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PACKING SLIP

TULMAR

Tulmar Safety Systems Inc.
1123 Cameron Street
Hawkesbury, ON K6A 2B8
Tel: 613-632-1282
Fax: 613-632-2030
GST R132478223
MID : XOTULSAF1123HAW
email: info@tulmar.com

Packing Slip No Page

62716 1

Ship Date
2/23/2018

Bill To:

Dart Aerospace

1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Canada

Ship To:

Dart Aerospace

1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Canada

Order number 35465 Sales order date 11/21/2017 Account number CDART100 Loc H Account manager Francine Bigras
PO number PO038417 Ship via Pick-Up Shipping Terms

Item No.	Description	Quantity ordered	UOM	Qty Shipped/Returned	Quantity on back order
REV 1: Pricing update - Dec. 22/17					
87307-002	Long Line, 150ft, 1/2" Plasma	1.00	EA	1.00	
Drawing No: P4400-150 + TEO17-741					
DWG Rev: 1					
SF 43750					

Lot no.: BATCH0000000001 1.00

DAS
38
9-89

Certificate of Conformance

☐ See Certification Enclosed

I hereby certify that the items listed hereon have been inspected, and / or tested (as applicable), conform to all specifications and requirements detailed in the contract or purchase order. Objective evidence to support this statement is on file, and can be made available upon request.
If any questions or concerns, please contact QA Manager @ 613-632-1282 ext. 225.

Authorized Inspector

Date:

FEB 23 2018

PACKING SLIP

TULMAR

Tulmar Safety Systems Inc.
1123 Cameron Street
Hawkesbury, ON K6A 2B8
Tel: 613-632-1282
Fax: 613-632-2030
GST R132478223
MID : XOTULSAF1123HAW
email: info@tulmar.com

Packing Slip No **63133** Page **1**

Ship Date
4/9/2018

Bill To:

Dart Aerospace
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Canada

Ship To:

Dart Aerospace
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Canada

Order number	Sales order date	Account number	Loc	Account manager
35815	3/12/2018	CDART100	H	Francine Bigras
PO number	Ship via	Shipping Terms		
RMA-019	Pick-Up			
Item No. Description	Quantity ordered	UOM	Qty Shipped/Returned	Quantity on back order
R&O MISC Misc R&O Item 87348-001: Long Line Rework (P5400-50)	1.00	EA	1.00	
R&O MISC Misc R&O Item 87307-002: Long line Rework (P4400-150)	1.00	EA	1.00	

RMA #: 18-019

Open Date: March 2, 2019

Customer Name: Dart	Customer Contact: Robert Aboud
Tulmar Part No: See below	Serial No:
Reference Order No: SO 35465	Original Ship Date: Feb. 2018
Detailed Problem Description: Need to rework per purchasing instructions: (1) x (87307-004 / P4400-25); 1 x P5400-50 (87348-001/P5400-50); 1 x (87307-002/P4400-150); (1) x 87347-002/P3000-100)/	

Investigation Summary

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Disposition

Send back to Atlantic Braids for rework. - NEW SALES ORDER # 35815
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Shipping Information

Shipping Date:	Shipping Charges: ☐ Tulmar ☐ Customer
Method: ☐ UPS ☐ Purolator ☒ FedEx ☐ Other	

Reviewed & Closed By: _____
Quality Assurance Manager

Date: _____